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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte OLLI PIIRAINEN

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Appeal 2010-004029  
Application 09/355,623  
Technology Center 2600

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Before MAHSHID D. SAADAT, ROBERT E. NAPPI, and  
DENISE M. POTIER, Administrative Patent Judges.

NAPPI, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the rejection of claims 1 through 34.

We affirm.

#### INVENTION

The invention is directed to a transmission method where two terminals are commanded to send to a base station a signal that uses the same time slot and frequency. (See Specification 2-3). Claim 1 is representative of the invention and reproduced below:

**CLAIM 1.** A transmission method used in a radio system that includes at least one base station comprising a plurality of RF heads and a plurality of subscriber terminals, at least two of which transmit access bursts to one and the same base station via different RF-heads, the access bursting activating between a subscriber terminal and a base station a connection that is established by a signal that is of a certain frequency and is sent in time slots, the method comprising:

commanding a first subscriber terminal to send the at least one base station a first signal using a determine time slot and a determined carrier frequency;

commanding a second subscriber terminal to send the at least one base station a second signal using the determined time slot and the determined carrier frequency simultaneously employed by the first subscriber terminal; and

commanding at least the second subscriber terminal to adjust a transmission moment of the second signal within the determined time slot so that the at least one base station receives the transmitted first and second signals at different moments within the same time slot.

#### REFERENCE

KAY	5,357,513	October 18, 1994
BJORK	6,084,862	July 4, 2000
BENN	GB 2308041	June 11, 1997

### REJECTION AT ISSUE

The Examiner has rejected claims 1 through 11, 13 through 15, 16, through 27, and 29 through 34 as unpatentable under 35 U.S.C. § 103(a) as being obvious over Kay.<sup>1</sup> Answer 3-6<sup>2</sup>.

The Examiner has rejected claims 12 and 28 under 35 U.S.C. § 103(a) as being obvious over Kay in view of Bjork. Answer 6-7.

### ISSUES

Appellant argues on page 8 through 13 of the Brief<sup>3</sup> that the Examiner's rejection of claims 1 through 11 and 13 through 16 is in error. These arguments present us with the issues:

- a) Did the Examiner err in finding that Kay teaches two subscriber terminals transmitting using a determined timeslot and frequency and adjusting the transmission of the second terminal so that the transmission is at a different moment in the same time slot?
- b) Did the Examiner err in finding that use of a plurality of RF heads is well known and that such modification to Kay would be obvious?

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<sup>1</sup> We note that the Examiner finds that certain claim elements are well known, without citing evidence. Answer 4. In response to Appellant's challenge to this assertion (Appeal Brief 11), the Examiner has cited to Benn, GB 2308041. Answer 11.

<sup>2</sup> Throughout this opinion we refer to the Examiner's Answer mailed on September 17, 2009.

## ANALYSIS

### Claims 1 through 11 and 13 through 16

We have reviewed the Examiners' rejection in light of Appellant's arguments that the Examiner has erred. We disagree with Appellant's conclusion that:

- a) the Examiner erred in finding that Kay teaches two subscriber terminals transmitting using a determined timeslot and frequency and adjusting the transmission of the second terminal so that the transmission is at a different moment in the same time slot; and
- b) Examiner erred in finding that use of a plurality of RF heads is well known and that such modification to Kay would be obvious.

We adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken and (2) the reasons set forth by the Examiner in the Examiner's Answer in response to Appellant's Appeal Brief. We concur with the conclusion reached by the Examiner.

#### First issue

Representative claim 1 recites commanding a first terminal to send a signal using a time slot and frequency; commanding a second terminal to send a signal at the same time slot and frequency, simultaneously employed by the first terminal and commanding the second terminal to adjust the momement of the signal within the time slot. The Examiner finds that Kay's Figure 16 depicts these limitations in that it shows two terminals transmitting in one slot and using one frequency (e.g. RR3 and RR4 in slot

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<sup>3</sup> Throughout this opinion we refer to the Appeal Brief dated May 18, 2009  
Footnote continued on next page.

1, frequency 7). Answer 9-10. That is, each command (e.g., RR3 and RR4) uses a different sub-slot and thus occurs at different moments within a slot. Answer 9-10. We concur with these findings by the Examiner.

Appellant argues that the claimed slot should be construed as one of Kay's sub slots. Reply Brief 2. As such, Appellant asserts that to meet the claims Kay must teach transmission of at least two stations at the same "frequency and same sub slot , i.e. Kay must teach simultaneous transmissions within one fundamental (or smallest allocable) resource block of the channel . . ." Reply Brief 2 (emphasis omitted). Thus, Appellant concludes that Kay does not teach the claimed invention. We disagree with Appellant's asserted claim interpretation. Representative claim 1 is not limited to the slot being one fundamental or smallest allocable resource block, and Appellant has not shown that such an interpretation is required by the Specification. Further, within the scope of the claim, the transmission from the first and second terminal does not occur at the same instant (i.e., the claim recites that the transmitted signals are at different moments within a time slot). Rather, the claim is broad enough to encompass simultaneously using the same time slot.<sup>4</sup> Thus, we concur with the Examiner's finding that Kay teaches two subscriber terminals transmitting using a determined timeslot and frequency and adjusting the transmission of the second terminal so that the transmission is at a different moment in the same time slot.

#### Second issue

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and Reply Brief dated November 17, 2009.

<sup>4</sup> We note that the claim could also broadly but reasonably be construed as simultaneously using only the same frequency, although it does not appear that the Examiner construed the claim in this manner.

Appellant asserts that the Examiner has not provided evidence to support the finding that using plural RF heads is well known, or that the motivation for modifying Kay to use multiple RF heads is missing from Kay and only found in Appellant's Specification. Appeal Brief 12-13, Reply Brief 4. We are not persuaded by these arguments. The Examiner has provided evidence by introducing the Benn reference which teaches using multiple RF heads in a communication system. See for example Figure 4. Answer 11. Further, the Examiner has stated a reason for modifying Kay to include multiple RF heads or "enhancing signal quality as well as extending coverage of the base station to areas (e.g.,] pico-cellular environment) where signals are degraded due to terrain or obstacles ...." Answer 11. This reason for using multiple RF heads is consistent with Benn's disclosure of the advantages of using multiple RF heads. See page 7 lines 23-30. Thus, contrary to Appellant's assertion the Examiner's reasoned rationale for modifying Kay to include multiple RF heads is supported by the evidence of record and is not based upon Appellant's disclosure.

As Appellant's arguments directed to the Examiner's rejection of claims 1 through 11 and 13 through 16 have not persuaded us of error, we sustain the Examiner's rejection of these claims.

Claims 17 through 27 and 29 through 34

Appellant addresses the rejection of claims 17 and 34 on pages 15 and 16 of the Brief. The statements on page 15 and 16 of the Brief restate limitations of the claims and assert Kay does not teach these limitations. Such statements do not rise to the level of separate arguments under 37 C.F.R. § 41.37(c)(1)(vii) and does not address the Examiner's findings

related to the limitations of claims 17 and 27. See *In re Lovin*, No. 2010-1499, 2011 WL 2937946, at\*7 (Fed. Cir. July 22, 2011). Thus, claims 17 through 27 and 29 through 34 are considered grouped with claim 1. Further, in as much as the limitations identified in pages 15 and 16 of the Brief are directed to Kay not teaching plural RF-heads, these arguments do not address the Examiner's finding discussed above with respect to claim 1 and regarding combining Kay with the known use of multiple RF heads, as evidenced by Benn. Accordingly, we sustain the Examiner's rejection of claims 17 through 27 and 29 through 34.

**Claims 12 and 28**

Appellant argues on page 14 of the Brief, that the additional teaching of Bjork does not make up for the deficiencies noted with respect to the rejection of claim 1. As discussed above, Appellant's arguments are not persuasive that the Examiner erred in rejecting claim 1. Thus, we sustain the Examiner's rejection of claims 12 and 28 for the reasons discussed with respect to claim 1.

**ORDER**

The decision of the Examiner to reject claims 1 through 34 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

**AFFIRMED**

Appeal 2010-004029  
Application 09/355,623

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